

## **REMARKS**

In response to the Office Action mailed March 28, 2006, Applicants respectfully request reconsideration. To further the prosecution of this application, each of the issues raised in the Office Action is addressed herein.

Claims 12, 14-15, 17-20, 23-25, 27-36 and 38-62<sup>1</sup> were previously pending in this application. Claims 12, 14-15, 17-19, 34, 39-41, and 61-62<sup>2</sup> have been allowed. Claims 33 and 42-60 are objected to as depending from a rejected base claim, but have been deemed allowable if rewritten in independent form. Claims 20, 23-25, 27-32 and 35-36 and 38 stand rejected.

In this response, claims 33 and 42 have been amended. Claim 33 has been rewritten in independent form. Claim 42 has been amended to recite, in independent form, the subject matter of claim 42 as originally pending (deemed allowable in the Office Action dated March 31, 2004). New claims 74 and 75 have been added to further define Applicants' contribution to the art. No new matter has been added.

### **I. Claim Rejections under 35 U.S.C. §103(a) – Poggi in view of Godlove**

On page 2 of the Office Action, claims 20, 23-25, 27-32, 35 and 38 (including independent claims 20, 23, 24, 27, and 35) are rejected under 35 U.S.C. §103(a) as allegedly being obvious over Poggi (U.S. Patent No. 5,800,041) in view of Godlove (U.S. Patent No. 5,034,757). Applicants respectfully traverse these rejections.

As set forth in MPEP §2143, three criteria must be met in order to establish a *prima facie* case of obviousness. First, there must be some suggestion or motivation, either in the cited reference(s) or in the knowledge generally available to one of ordinary skill in the art, to modify the cited reference(s) or to combine reference teachings (if multiple references are cited). Second, there must be a reasonable expectation of success. The teaching or suggestion to modify the reference(s)

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<sup>1</sup> Applicants note that in the Office Action Summary, claims 13, 16, 21, 22 and 26 are listed as pending; however, these claims were cancelled in Applicants' Response dated December 12, 2005.

or to combine reference teachings, as well as the reasonable expectation of success, must both be found in the prior art and not based on Applicants' disclosure. Third, the prior art reference(s), when viewed as a whole, must teach or suggest all of the claimed features. Failure to meet any one of these criteria – a specific suggestion or motivation to modify or combine the prior art, a reasonable expectation of success, and a teaching or suggestion of all claim elements – is sufficient to render an obviousness rejection improper.

As discussed below, in the rejections of independent claims 20, 23, 24, 27 and 35, *none* of these three criteria is met.

1. There is no suggestion or motivation to combine Poggi and Godlove.

Poggi is directed to an underwater light fitting for niche mounting in a swimming pool or spa (Abstract; col. 1, lines 7-10). The fitting comprises a housing containing a light source in the form of a bulb (Abstract; col. 4, lines 25-27).

Godlove is directed to an image write bar comprising an LED array, which may be used in electrophotographic copiers or printers (Abstract; col. 1, lines 16-23). A distributed resistance network is used in connection with the LED array to ensure that the LEDs generate a uniform output irrespective of how many LEDs are on (col. 1, line 66 – col. 2, line 3 and col. 2, lines 36-39).

The Office Action suggests that a person of ordinary skill in the art would have been motivated to modify the lamp system of Poggi to include the LEDs of Godlove to “provide different colors” and to “provide the lamp system for multi-colors in the water.” Applicants respectfully disagree that a person of ordinary skill in the art would have been so motivated.

First, as discussed in detail in connection with claim 20, ***Godlove does not disclose or suggest that the LED write bar array may provide different colors.*** Therefore, there is no motivation to combine the teachings Godlove with those of Poggi for the stated purpose of providing different colors, because the references could not be combined to form a lamp system that serves this purpose.

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<sup>2</sup> Applicants note that in the Office Action Summary, claim 13 is also listed as allowed. As explained above, this claim was cancelled in Applicants' December 12<sup>th</sup> Response.

Second, there does not appear to be any other suggestion or motivation to modify the lamp system of Poggi to include the LEDs of Godlove. ***Poggi and Godlove address two unrelated problems and solve their respective problems by unrelated solutions.*** Poggi is concerned with a light fitting for a swimming pool or spa, and addresses problems with the maintenance of such light fittings (col. 1, lines 7-10; col. 6, lines 54). In contrast, Godlove is concerned with an LED write bar array, such as used in an electrophotographic copier or printer, and addresses the problem of compensating for defective LEDs (col. 2, lines 4-10 and 23-24; col. 1, lines 18-19). Thus, Poggi and Godlove are directed to different fields of endeavor and unrelated problems.

In view of the foregoing, one of ordinary skill in the art would not have been motivated to combine Poggi and Godlove in the manner suggested. Accordingly, a *prima facie* case of obviousness has not been established pursuant to MPEP § 2143.

2. There is no reasonable expectation of success.

The Office Action fails to specify any indication, either in the references themselves or in the knowledge generally available in the art, of a reasonable expectation of success in combining Poggi and Godlove. Most notably, the Office Action completely fails to specify or suggest in any manner *how* one of ordinary skill in the art would practically and realistically modify the light fitting of Poggi to include the LED write bar array of Godlove in a manner that would successfully arrive at an apparatus that would resemble the subject matter of any of independent claims 20, 23, 24, 27 or 35.

Thus, not only do the references fail to provide any such teaching, suggestion or motivation for the combination, but furthermore the Office Action provides no insight as to how to practically and successfully implement such a combination. For this additional reason, a *prima facie* case of obviousness has not been established pursuant to MPEP § 2143.

3. The combination of Poggi and Godlove does not teach or suggest  
all claim elements.
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As discussed below, at least one feature of each of independent claims 20, 23, 24, 27 is 35 is not taught or suggested by the combination of Poggi and Godlove. For this further reason, a *prima facie* case of obviousness has not been established pursuant to MPEP § 2143.

a. Independent Claim 20

Applicants' claim 20 is directed to an apparatus, comprising at least one light source adapted to be supported by one of a pool and a spa to illuminate a liquid contained in the one of the pool and the spa, the at least one light source including at least one LED. The at least one light source is adapted to generate radiation of different colors without requiring the use of a color filter.

The proposed combination of Poggi and Godlove fails to disclose or suggest each of the limitations of claim 20.

First, the combination of Poggi and Godlove does not teach or suggest "at least one light source... adapted to generate radiation of different colors without requiring the use of a color filter." The Office Action concedes that Poggi does not disclose this feature, and relies on Godlove in this respect (Office Action at page 2). However, Godlove likewise does not disclose this feature. As discussed in section 1 above, ***Godlove does not disclose or suggest that the LED write bar array may generate radiation of different colors.*** The cited portions of Godlove (i.e., Figs 2-3; col. 2, lines 24-67; col. 3, lines 1-10) merely show and describe a write bar array (e.g., for a copier or printer) including LEDs and a circuit for controlling the current flow through the LEDs, and make no mention of the color of the radiation that is generated by the LED write bar array.

Further, it would not be obvious to include this feature in Godlove. The LEDs of Godlove form a write bar array (col. 2, lines 23-24). As explained in the "Background" section of Godlove, LED arrays have significant application in electrophotographic copiers and printers where they are used, for example, to write images on a photosensitive recording member. Thus, it does not appear desirable that the LEDs of the write bar array provide light of different colors.

Second, the combination of Poggi and Godlove does not teach or suggest "at least one light source adapted to be supported by one of a pool and a spa to illuminate a liquid contained in the one

of the pool and the spa, the at least one light source including at least one LED.” As conceded in the Office Action, Poggi does not disclose this feature (Office Action at page 2). Furthermore, although Godlove discloses at least one LED, Godlove does not disclose or suggest at least one light source including at least one LED, wherein the at least one light source is *adapted to be supported by one of a pool and a spa*. Rather, Godlove merely discloses a light source (in the form of an image write bar) that is adapted for use in an electrophotographic copier or printer (Abstract; col. 1, lines 16-23).

For the foregoing reasons, Poggi and Godlove, alone or in combination, fail to teach or suggest all limitations of claim 20.

Further, as discussed in sections 1 and 2 above, one of ordinary skill in the art simply would not have been motivated to combine Poggi and Godlove, nor is there any reasonable expectation of success in so doing.

Accordingly, the Office Action has failed to establish *any* of the criteria of a *prima facie* case of obviousness with respect to claim 20, and withdrawal of the rejection of this claim is therefore respectfully requested.

b. Independent Claim 23

Applicants’ claim 23 is directed to an apparatus, comprising at least one light source adapted to be supported by one of a pool and a spa to illuminate a liquid contained in the one of the pool and the spa, the at least one light source including at least one LED. The at least one LED includes at least two independently controllable LEDs.

The proposed combination of Poggi and Godlove fails to disclose or suggest each of the limitations of claim 23. In particular, for the reasons discussed in connection with claim 20, both Poggi and Godlove fail to disclose or suggest “at least one light source adapted to be supported by one of a pool and a spa to illuminate a liquid contained in the one of the pool and the spa, the at least one light source including at least one LED,” as recited in claim 23. Thus, Poggi and Godlove, alone or in combination, fail to teach or suggest all limitations of claim 23.

Further, as discussed in sections 1 and 2 above, one of ordinary skill in the art simply would not have been motivated to combine Poggi and Godlove, nor is there any reasonable expectation of success in so doing.

Accordingly, the Office Action has failed to establish *any* of the criteria of a *prima facie* case of obviousness with respect to claim 23, and withdrawal of the rejection of this claim is therefore respectfully requested.

c. Independent Claim 24

Applicants' claim 24 is directed to an apparatus, comprising at least one light source adapted to be supported by one of a pool and a spa to illuminate a liquid contained in the one of the pool and the spa, the at least one light source including at least one LED. The at least one light source includes at least two independently controllable light sources.

The proposed combination of Poggi and Godlove fails to disclose or suggest each of the limitations of claim 24. In particular, for the reasons discussed in connection with claim 20, both Poggi and Godlove fail to disclose or suggest "at least one light source adapted to be supported by one of a pool and a spa to illuminate a liquid contained in the one of the pool and the spa, the at least one light source including at least one LED," as recited in claim 24. Thus, Poggi and Godlove, alone or in combination, fail to teach or suggest all limitations of claim 24.

Further, as discussed in sections 1 and 2 above, one of ordinary skill in the art simply would not have been motivated to combine Poggi and Godlove, nor is there any reasonable expectation of success in so doing.

Accordingly, the Office Action has failed to establish *any* of the criteria of a *prima facie* case of obviousness with respect to claim 24, and withdrawal of the rejection of this claim is therefore respectfully requested. Claim 25 depends from claim 24, and is allowable at least based on its dependency.

d. Independent Claim 27

Applicants' claim 27 is directed to an apparatus, comprising at least one light source adapted to be supported by one of a pool and a spa to illuminate a liquid contained in the one of the pool and

the spa, the at least one light source including at least one LED and at least one controller coupled to the at least one light source to control radiation output by the at least one light source.

The proposed combination of Poggi and Godlove fails to disclose or suggest each of the limitations of claim 27. First, for the reasons discussed in connection with claim 20, both Poggi and Godlove fail to disclose or suggest “at least one light source adapted to be supported by one of a pool and a spa to illuminate a liquid contained in the one of the pool and the spa, the at least one light source including at least one LED,” as recited in claim 27.

Second, the combination of Poggi and Godlove does not teach or suggest “at least one controller coupled to the at least one light source to control radiation output by the at least one light source.” Neither Poggi nor Godlove discloses or suggests a controller to control radiation output by a light source. Indeed, the Office Action does not allege that either Poggi or Godlove discloses or suggests the controller of claim 27.

For the foregoing reasons, Poggi and Godlove, alone or in combination, fail to teach or suggest all limitations of claim 27.

Further, as discussed in sections 1 and 2 above, one of ordinary skill in the art simply would not have been motivated to combine Poggi and Godlove, nor is there any reasonable expectation of success in so doing.

Accordingly, the Office Action has failed to establish *any* of the criteria of a *prima facie* case of obviousness with respect to claim 27, and withdrawal of the rejection of this claim is therefore respectfully requested. Claims 28-33 depend from claim 27, and are allowable at least based on their dependency.

e. Independent Claim 35

Applicants’ claim 35 is directed to a light fixture for one of a pool and a spa, comprising at least one LED and an interface coupled to the at least one LED, the interface being adapted to engage mechanically and electrically with a wedge type light socket supported by the one of the pool and the spa, wherein the at least one LED includes at least two differently colored LEDs.

The proposed combination of Poggi and Godlove fails to disclose or suggest each of the limitations of claim 35. First, for reasons similar to those discussed in connection with claim 20, both Poggi and Godlove fail to disclose or suggest “a light fixture for one of a pool and a spa, comprising at least one LED,” as recited in claim 35.

Second, the combination of Poggi and Godlove does not teach or suggest “an interface coupled to the at least one LED, the interface being adapted to engage mechanically and electrically with a wedge type light socket supported by the one of the pool and the spa,” as recited in claim 35. The Office Action concedes that Poggi does not disclose this feature. The feature is likewise absent from Godlove. Godlove is *completely silent* with respect to any light sockets or light socket interfaces for the LEDs of the write bar array. Thus, Godlove certainly does not disclose or suggest an interface adapted to engage with a “wedge type” light socket or a light socket “supported by the one of the pool and the spa” as recited in claim 35.

Third, the combination of Poggi and Godlove does not teach or suggest at least one LED including “at least two differently colored LEDs,” as recited in claim 35. The Office Action concedes that Poggi does not disclose this feature. Godlove likewise does not disclose or suggest this feature. Godlove does not describe the color of the LEDs of the write bar array, and provides no suggestion that the LEDs may be differently colored. Indeed, as discussed herein, there appears to be no desirability of the use of differently colored LEDs in the write bar array of Godlove.

For the foregoing reasons, Poggi and Godlove, alone or in combination, fail to teach or suggest all limitations of claim 35.

Further, as discussed in sections 1 and 2 above, one of ordinary skill in the art simply would not have been motivated to combine Poggi and Godlove, nor is there any reasonable expectation of success in so doing.

Accordingly, the Office Action has failed to establish *any* of the criteria of a *prima facie* case of obviousness with respect to claim 35, and withdrawal of the rejection of this claim is therefore respectfully requested. Claims 36 and 38 depend from claim 35, and are allowable at least based on their dependency.



## II. Amended Claims

Claims 33 and 42 have been amended herein solely to accept subject matter deemed allowable by the Examiner, and not to overcome any prior art of record. Each of these claims is believed to be allowable over the prior art of record for the reasons discussed below.

### a. Claim 33

Applicants appreciate the indication on page 5 of the Office Action that claim 33 recites allowable subject matter. Claim 33 has been rewritten in independent form with all of the limitations of claim 27 (from which claim 33 previously depended). Accordingly, allowance of this claim is respectfully requested.

### b. Claim 42

Applicants appreciate the indication on page 5 of the Office Action that claim 42 recites allowable subject matter. Although claim 42 has been rewritten in independent form, it has been amended to include all of the limitations of corresponding independent claim 35 except for the recitation “wherein the at least one LED includes at least two differently colored LEDs,” which was added to claim 35 in the Amendment dated June 22, 2004. Thus, claim 42 as amended reflects claim 42 *as originally filed*, rewritten in independent form.

The added recitation has been omitted from claim 42, as it is not needed to distinguish over the art of record. Indeed, Applicants note that the subject matter of claim 42 as now presented was deemed allowable in the Office Action mailed March 31, 2004 (see March 31, 2004 Office Action at page 3).

In view of the foregoing, claim 42 is allowable over the prior art of record. Claims 43-60 depend from claim 42 and are allowable at least based on their dependency.

### III. Newly Added Claims

Dependent claims 74 and 75 have been added to more fully define Applicants' contribution to the art. Claims 74 and 75 depend from claim 42, which is allowable for the reasons discussed in section II above. Thus, claims 74 and 75 are allowable at least based on its dependency from independent claim 42.

### IV. General Comments on Dependent Claims

Since each of the dependent claims depends from a base claim that is believed to be in condition for allowance, Applicants believe that it is unnecessary at this time to argue the allowability of each of the dependent claims individually. However, Applicants do not necessarily concur with the interpretation of the dependent claims as set forth in the Office Action, nor do Applicants concur that the basis for the rejection of any of the dependent claims is proper. Therefore, Applicants reserve the right to specifically address the patentability of the dependent claims in the future, if deemed necessary.

### **Conclusion**

It is respectfully believed that all of the pending claims have been addressed. However, the absence of a reply to a specific rejection, issue or comment set forth in the Office Action does not signify agreement with or concession of that rejection, issue or comment. In addition, because the arguments made above may not be exhaustive, there may be reasons for patentability of any or all pending claims (or other claims) that have not been expressed. Furthermore, nothing in this paper should be construed as an intent to concede any issue with regard to any claim, except as specifically stated in this paper, and the amendment of any claim does not necessarily signify any concession of unpatentability of the claim prior to its amendment.

In view of the foregoing amendments and remarks, this application should now be in condition for allowance. A notice to this effect is respectfully requested. If the Examiner believes, after this amendment, that the application is not in condition for allowance, the Examiner is requested to call the Applicants' representative at the telephone number indicated below to discuss any outstanding issues relating to the allowability of the application.

If this response is not considered timely filed and if a request for an extension of time is otherwise absent, Applicants hereby request any necessary extension of time. If there is a fee occasioned by this response, including an extension fee, that is not covered by an enclosed check, please charge any deficiency to Deposit Account No. 23/2825.

Dated: June 28, 2006

Respectfully submitted,

By: /Joseph Teja, Jr./

Joseph Teja, Jr., Reg. No. 45,157  
Melissa A. Beede, Reg. No. 54,986  
WOLF, GREENFIELD & SACKS, P.C.  
Federal Reserve Plaza  
600 Atlantic Avenue  
Boston, Massachusetts 02210-2206  
(617) 646-8000